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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,253	03/06/2002	Barry Nagle	2008.PGG	6812

7590 03/23/2004

EXAMINER
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ART UNIT	PAPER NUMBER
1638	

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/091,253	NAGLE ET AL.	
	Examiner	Art Unit	
	David T. Fox	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 11-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 11-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/12/04;9/22/03;5/28/02; 3/6/02*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Applicant's election without traverse of Group I in the paper filed 07 January 2004 is acknowledged. Non-elected claims 8-10 and 18-20 have been cancelled. Claims 1-7 and 11-17 have been examined.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pearlstein et al (US 5,675,064) in view of Bergquist et al (US 5,706,603), further in view of Nagle et al (US 5,954,883).

The claims are drawn to the crossing of two maize hybrids, one of which is homozygous recessive for waxy and either male sterile or male fertile, and the other which is homozygous recessive for both waxy and sugary-2 and either male fertile or

male sterile, wherein said hybrids are planted in blocks of rows, and wherein the seeds produced by said hybrids are separately harvested. The product of such a cross would be homozygous recessive for waxy and heterozygous for Sugary-2.

Pearlstein et al teach the desirability of starch produced by maize kernels which are homozygous recessive for the waxy allele and heterozygous for the sugary-1 allele, wherein said kernels may be produced by crossing plants which are homozygous recessive for the waxy allele and dominant for the sugary-1 allele, wherein male sterility systems are employed for controlled pollination (see, e.g., column 1, line 54 through column 2, line 35; column 2, line 51 through column 3, line 19; column 3, lines 41-46; column 4, line 61 through column 5, line 24; column 5, line 59 through column 6, line 16; column 7, line 36 through column 8, line 39; column 9, lines 35-62; column 11, lines 17-26; column 12, lines 3-10 and 61-67; column 13, lines 1-10).

Pearlstein et al do not teach the use of hybrids as the parental lines, or the use of the sugary-2 allele.

Bergquist et al teach the advantages of crossing maize plants including maize hybrids which differ in kernel quality trait alleles such as waxy, wherein more female plants than male plants are employed to maximize seed yield, wherein male sterility systems are employed to control pollination, wherein the male and female plants may be interplanted, and wherein the seeds from the male and female plants may be blended (see, e.g., column 1, lines 13-21; column 3, line 25 through column 4, line 16; column 6, lines 9-27; column 8, line 48 through column 9, line 12; column 10, lines 7-12

and Table 1; column 11, lines 1-27 and 60-67; columns 12-13; column 18, line 61 through column 19, line 26; column 21, lines 13-18 and 30-56; claims 1, 19-20 and 22).

Nagle et al teach the desirability of maize kernels which are homozygous for waxy and heterozygous for sugary-2, wherein said kernels may be produced by crossing maize plants which are homozygous for waxy with maize plants which are dominant for Sugary-2, wherein male sterility systems may be employed (see, e.g., column 3, line 62 through column 4, line 59).

It would have been obvious to one of ordinary skill in the art to utilize the method of crossing two maize plants which have different alleles at the waxy and sugary loci using male sterility, as taught by Pearlstein et al, and to modify that method by incorporating hybrid plants and mixed planting and harvesting, as taught by Bergquist et al, and to further modify that method by incorporating the Sugary-2 locus for the production of improved starch as taught by Nagle et al; given the recognition by those of ordinary skill in the art that each would have continued to function in its known and expected manner, and given the suggestion by Bergquist et al of the wide applicability of the method. Choice of ratio of male to female plants would have been the optimization of process parameters.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is (571) 272-0795. The examiner can normally be reached on Monday through Friday from 10:30AM to 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached on (571) 272-0804. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

March 21, 2004

DAVID T. FOX
PRIMARY EXAMINER
GROUP ~~180~~ 1638